



**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Parts 52 and 81**

**[EPA-R05-OAR-2021-0949; FRL- 9532-01-R5]**

**Air Plan Approval; Ohio; Redesignation of the Ohio portion of  
the Cincinnati, Ohio-Kentucky Area to Attainment of the 2015  
Ozone Standard**

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Proposed rule.

**SUMMARY:** The Environmental Protection Agency (EPA) is proposing to find that the Cincinnati, Ohio-Kentucky area (Area) is attaining the 2015 8-hour ozone National Ambient Air Quality Standard (NAAQS or standard) and to approve a request from the Ohio Environmental Protection Agency (OEPA) to redesignate the Ohio portion of the Area to attainment for the 2015 ozone NAAQS because the request meets the statutory requirements for redesignation under the Clean Air Act (CAA). The Area includes Butler, Clermont, Hamilton, and Warren Counties in Ohio and Boone, Campbell, and Kenton Counties in Kentucky. OEPA submitted this request on December 21, 2021. EPA is also proposing to approve, as a revision to the Ohio State Implementation Plan (SIP), the state's plan for maintaining the 2015 8-hour ozone standard through 2035 in the Area. Finally, EPA is proposing to approve the state's 2026 and 2035 volatile organic compound (VOC) and oxides of nitrogen (NO<sub>x</sub>) Motor Vehicle Emission Budgets (MVEBs) for the Ohio portion of the Area.

**DATES:** Comments must be received on or before **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

**ADDRESSES:** Submit your comments, identified by Docket ID No. EPA-R05-OAR-2021-0949 at <https://www.regulations.gov> or via email to [arra.sarah@epa.gov](mailto:arra.sarah@epa.gov). For comments submitted at Regulations.gov, follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from Regulations.gov. For either manner of submission, EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. EPA will generally not consider comments or comment contents located outside of the primary submission (i.e. on the web, cloud, or other file sharing system). For additional submission methods, please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section. For the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit <https://www2.epa.gov/dockets/commenting-epa-dockets>.

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**SUPPLEMENTARY INFORMATION:** Throughout this document whenever "we," "us," or "our" is used, we mean EPA. This supplementary information section is arranged as follows:

- I. What are the actions EPA is proposing?
- II. What is the background for these actions?
- III. What are the criteria for redesignation?
- IV. What is EPA's analysis of Ohio's redesignation request?
  - A. Has the Area attained the 2015 8-hour ozone NAAQS?
  - B. Has Ohio met all applicable requirements of section 110 and part D of the CAA for the Area, and does the Ohio portion of the area have a fully approved SIP under section 110(k) of the CAA?
  - C. Are the air quality improvements in the Area due to permanent and enforceable emission reductions?
  - D. Does Ohio have a fully approvable ozone maintenance plan for the Area?
  - V. Has the state adopted approvable motor vehicle emission budgets?
    - A. Motor vehicle emission budgets.
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- VI. Proposed actions.
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**I. What are the actions EPA is proposing?**

EPA is proposing to take several related actions. EPA is proposing to determine that the Area, currently designated nonattainment, is attaining the 2015 ozone standard. This is based on quality-assured and certified monitoring data for 2019-2021 and EPA's findings that the Ohio portion of the Area has met the requirements for redesignation under section

107(d) (3) (E) of the CAA. EPA is thus proposing to approve OEPA's request to change the legal designation of the Ohio portion of the Area from nonattainment to attainment for the 2015 ozone standard. EPA is also proposing to approve, as a revision to the Ohio SIP, the state's maintenance plan (such approval being one of the CAA criteria for redesignation to attainment status) for the Area. The maintenance plan is designed to keep the Area in attainment of the 2015 ozone NAAQS through 2035. Finally, EPA is proposing to approve the newly established 2026 and 2035 MVEBs for the Ohio portion of the Area for transportation conformity purposes.

## **II. What is the background for these actions?**

EPA has determined that ground-level ozone is detrimental to human health. On October 1, 2015, EPA promulgated a revised 8-hour ozone NAAQS of 0.070 parts per million (ppm). See 80 FR 65291 (October 26, 2015). Under EPA's regulations at 40 CFR part 50, the 2015 8-hour ozone NAAQS is attained in an area when the 3-year average of the annual fourth highest daily maximum 8-hour average concentration is equal to or less than 0.070 ppm, when truncated after the thousandth decimal place, at all of the ozone monitoring sites in the area. See 40 CFR 50.15 and appendix P to 40 CFR part 50.

Upon promulgation of a new or revised NAAQS, section 107(d) (1) (B) of the CAA requires EPA to designate as nonattainment any areas that are violating the NAAQS, based on the most recent three years of quality assured ozone monitoring

data. The Cincinnati area was designated as a marginal nonattainment area for the 2015 ozone NAAQS on June 4, 2018 (83 FR 25776, effective August 3, 2018).

### **III. What are the criteria for redesignation?**

Section 107(d)(3)(E) of the CAA allows redesignation of an area to attainment of the NAAQS provided that: (1) the Administrator (EPA) determines that the area has attained the NAAQS; (2) the Administrator has fully approved the applicable implementation plan for the area under section 110(k) of the CAA; (3) the Administrator determines that the improvement in air quality is due to permanent and enforceable reductions in emissions resulting from implementation of the applicable SIP, applicable Federal air pollutant control regulations, and other permanent and enforceable emission reductions; (4) the Administrator has fully approved a maintenance plan for the area as meeting the requirements of section 175A of the CAA; and (5) the state containing the area has met all requirements applicable to the area for the purposes of redesignation under section 110 and part D of the CAA.

On April 16, 1992, EPA provided guidance on redesignations in the General Preamble for the Implementation of Title I of the CAA Amendments of 1990 (57 FR 13498) and supplemented this guidance on April 28, 1992 (57 FR 18070). EPA has provided further guidance on processing redesignation requests in the following documents:

1. "Ozone and Carbon Monoxide Design Value Calculations,"

Memorandum from Bill Laxton. Director, Technical Support Division, June 18, 1990;

2. "Maintenance Plans for Redesignation of Ozone and Carbon Monoxide Nonattainment Areas," Memorandum from G.T. Helms, Chief, Ozone/Carbon Monoxide Programs Branch, April 30, 1992;
3. "Contingency Measures for Ozone and Carbon Monoxide (CO) Redesignations," Memorandum from G.T. Helms, Chief, Ozone/Carbon Monoxide Programs Branch, June 1, 1992;
4. "Procedures for Processing Requests to Redesignate Areas to Attainment," Memorandum from John Calcagni, Director, Air Quality Management Division, September 4, 1992 (the "Calcagni Memorandum");
5. "State Implementation Plan (SIP) Actions Submitted in Response to Clean Air Act (CAA) Deadlines," Memorandum from John Calcagni, Director, Air Quality Management Division, October 28, 1992;
6. "Technical Support Documents (TSDs) for Redesignation of Ozone and Carbon Monoxide (CO) Nonattainment Areas," Memorandum from G.T. Helms, Chief, Ozone/Carbon Monoxide Programs Branch, August 17, 1993;
7. "State Implementation Plan (SIP) Requirements for Areas Submitting Requests for Redesignation to Attainment of the Ozone and Carbon Monoxide (CO) National Ambient Air Quality Standards (NAAQS) On or After November 15, 1992," Memorandum from Michael H. Shapiro, Acting Assistant

- Administrator for Air and Radiation, September 17, 1993;
8. "Use of Actual Emissions in Maintenance Demonstrations for Ozone and CO Nonattainment Areas," Memorandum from D. Kent Berry, Acting Director, Air Quality Management Division, November 30, 1993;
  9. "Part D New Source Review (Part D NSR) Requirements for Areas Requesting Redesignation to Attainment," Memorandum from Mary D. Nichols, Assistant Administrator for Air and Radiation, October 14, 1994; and
  10. "Reasonable Further Progress, Attainment Demonstration, and Related Requirements for Ozone Nonattainment Areas Meeting the Ozone National Ambient Air Quality Standard," Memorandum from John S. Seitz, Director, Office of Air Quality Planning and Standards, May 10, 1995.

**IV. What is EPA's analysis of Ohio's redesignation request?**

*A. Has the Area attained the 2015 8-hour ozone NAAQS?*

For redesignation of a nonattainment area to attainment, the CAA requires EPA to determine that the area has attained the applicable NAAQS (CAA section 107(d)(3)(E)(i)). An area is attaining the 2015 ozone NAAQS if it meets the 2015 ozone NAAQS, as determined in accordance with 40 CFR 50.15 and appendix P of part 50, based on three complete, consecutive calendar years of quality-assured air quality data for all monitoring sites in the area. To attain the NAAQS, the three-year average of the annual fourth-highest daily maximum 8-hour average ozone concentrations (ozone design values) at each monitor must not exceed 0.070 ppm.

The air quality data must be collected and quality-assured in accordance with 40 CFR part 58 and recorded in EPA's Air Quality System (AQS). Ambient air quality monitoring data for the 3-year period must also meet data completeness requirements. An ozone design value is valid if daily maximum 8-hour average concentrations are available for at least 90 percent of the days within the ozone monitoring seasons,<sup>1</sup> on average, for the three-year period, with a minimum data completeness of 75 percent during the ozone monitoring season of any year during the three-year period. See section 4 of appendix U to 40 CFR part 50.

EPA has reviewed the available ozone monitoring data from monitoring sites in the Area for the 2019-2021 period. These data have been quality assured, are recorded in the AQS, and have been certified. These data demonstrate that the Area is attaining the 2015 ozone NAAQS. The annual fourth-highest 8-hour ozone concentrations and the 3-year average of these concentrations (monitoring site ozone design values) for each monitoring site are summarized in Table 1.

Table 1. Annual 4<sup>th</sup> high daily maximum 8-hour ozone concentrations and 3-year average of the 4<sup>th</sup> high daily maximum 8-hour ozone concentrations for the Area.

State	County	Monitor	2019 4 <sup>th</sup> high (ppm)	2020 4 <sup>th</sup> high (ppm)	2021 4 <sup>th</sup> high (ppm)	2019-2021 average (ppm)
Ohio	Butler	39-017-0018	0.067	0.070	0.064	0.067
		39-017-0023	0.067	0.067	0.066	0.066
		39-017-9991	0.065	0.064	0.063	0.064
	Clermont	39-025-0022	0.071	0.064	0.065	0.066

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<sup>1</sup> The ozone season is defined by state in 40 CFR 58 appendix D. For the 2012-2014 and 2013-2015 time periods, the ozone seasons for Ohio, Indiana, and Kentucky were April-October, April-September, and March-October, respectively. Beginning in 2016, the ozone seasons for Ohio, Indiana and Kentucky are March-October. See, 80 FR 65292, 65466-67 (October 26, 2015).

	Hamilton	39-061-0006	0.072	0.070	0.070	0.070
		39-061-0010	0.067	0.070	0.064	0.067
		39-061-0040	0.071	0.068	0.069	0.069
	Warren	39-165-0007	0.070	0.071	0.069	0.070
	Boone	21-015-0003	0.062	0.062	0.061	0.061
Kentucky	Campbell	21-037-3002	0.062	0.063	0.064	0.063

The 3-year ozone design value for 2019-2021 is 0.07 ppm,<sup>2</sup> which meets the 2015 ozone NAAQS. Therefore, in today's action, EPA proposes to determine that the Area is attaining the 2015 ozone NAAQS.

EPA will not take final action to determine that the Area is attaining the NAAQS nor to approve the redesignation of this area if the design value of a monitoring site in the area exceeds the NAAQS after proposal but prior to final approval of the redesignation. As discussed in section IV.D.3. below, OEPA has committed to continue monitoring ozone in this area to verify maintenance of the 2015 ozone NAAQS.

*B. Has Ohio met all applicable requirements of section 110 and part D of the CAA for the Area, and does the Ohio portion of the area have a fully approved SIP under section 110(k) of the CAA?*

As criteria for redesignation of an area from nonattainment to attainment of a NAAQS, the CAA requires EPA to determine that the state has met all applicable requirements under section 110 and part D of title I of the CAA (see section 107(d)(3)(E)(v) of the CAA) and that the state has a fully approved SIP under section 110(k) of the CAA (see section 107(d)(3)(E)(ii) of the

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<sup>2</sup> The monitor ozone design value for the monitor with the highest 3-year averaged concentration.

CAA). EPA proposes to find that Ohio has a fully approved SIP under section 110(k) of the CAA. Additionally, EPA proposes to find that the Ohio SIP satisfies the criterion that it meets applicable SIP requirements, for purposes of redesignation, under section 110 and part D of title I of the CAA (requirements specific to nonattainment areas for the 2015 ozone NAAQS). In making these proposed determinations, EPA ascertained which CAA requirements are applicable to the Area and the Ohio SIP and, if applicable, whether the required Ohio SIP elements are fully approved under section 110(k) and part D of the CAA. As discussed more fully below, SIPs are required to be fully approved only with respect to currently applicable requirements of the CAA.

The September 4, 1992, Calcagni memorandum (see "Procedures for Processing Requests to Redesignate Areas to Attainment," Memorandum from John Calcagni, Director, Air Quality Management Division, September 4, 1992) describes EPA's interpretation of section 107(d)(3)(E) of the CAA. Under this interpretation, a state and the area it wishes to redesignate must meet the relevant CAA requirements that are due prior to the state's submittal of a complete redesignation request for the area. See also the September 17, 1993, Michael Shapiro memorandum and 60 FR 12459, 12465-66 (March 7, 1995) (redesignation of Detroit-Ann Arbor, Michigan to attainment of the 1-hour ozone NAAQS). Applicable requirements of the CAA that come due subsequent to the state's submittal of a complete request remain applicable

until a redesignation to attainment is approved but are not required as a prerequisite to redesignation. See section 175A(c) of the CAA. *Sierra Club v. EPA*, 375 F.3d 537 (7<sup>th</sup> Cir. 2004). See also 68 FR 25424, 25427 (May 12, 2003) (redesignation of the St. Louis/East St. Louis area to attainment of the 1-hour ozone NAAQS).

1. Ohio has met all applicable requirements of section 110 and part D of the CAA applicable to the Ohio portion of the Area for purposes of redesignation.

a. Section 110 General Requirements for Implementation Plans.

Section 110(a)(2) of the CAA delineates the general requirements for a SIP. Section 110(a)(2) provides that the SIP must have been adopted by the state after reasonable public notice and hearing, and that, among other things, it must: (1) include enforceable emission limitations and other control measures, means or techniques necessary to meet the requirements of the CAA; (2) provide for establishment and operation of appropriate devices, methods, systems and procedures necessary to monitor ambient air quality; (3) provide for implementation of a source permit program to regulate the modification and construction of stationary sources within the areas covered by the plan; (4) include provisions for the implementation of part C prevention of significant deterioration (PSD) and part D new source review (NSR) permit programs; (5) include provisions for stationary source emission control measures, monitoring, and reporting; (6) include provisions for air quality modeling; and,

(7) provide for public and local agency participation in planning and emission control rule development.

Section 110(a)(2)(D) of the CAA requires SIPs to contain measures to prevent sources in a state from significantly contributing to air quality problems in another state. To implement this provision, EPA has required certain states to establish programs to address transport of certain air pollutants, e.g., NO<sub>x</sub> SIP call.<sup>3</sup> However, like many of the 110(a)(2) requirements, the section 110(a)(2)(D) SIP requirements are not linked with a particular area's ozone designation and classification. EPA concludes that the SIP requirements linked with an area's ozone designation and classification are the relevant measures to evaluate when reviewing a redesignation request for the area. The section 110(a)(2)(D) requirements, where applicable, continue to apply to a state regardless of the designation of any one particular area within the state. Thus, we believe these requirements are not applicable requirements for purposes of redesignation. See 65 FR 37890 (June 15, 2000), 66 FR 50399 (October 19, 2001), 68 FR 25418, 25426-27 (May 13, 2003).

In addition, EPA believes that other section 110 elements that are neither connected with nonattainment plan submissions

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<sup>3</sup> On October 27, 1992 (63 FR 57356), EPA issued a NO<sub>x</sub> SIP call requiring the District of Columbia and 22 states to reduce emissions of NO<sub>x</sub> in order to reduce the transport of ozone and ozone precursors. In compliance with EPA's NO<sub>x</sub> SIP call, Ohio developed rules governing the control of NO<sub>x</sub> emissions from Electric Generating Units (EGUs), major non-EGU industrial boilers and turbines, and major cement kilns. EPA approved Ohio's rules as fulfilling Phase I of the NO<sub>x</sub> SIP Call on August 5, 2003 (68 FR 46089) and June 27, 2005 (70 FR 36845), and as meeting Phase II of the NO<sub>x</sub> SIP Call on February 4, 2008 (73 FR 6427).

nor linked with an area's ozone attainment status are not applicable requirements for purposes of redesignation. The relevant area will still be subject to these requirements after the area is redesignated to attainment of the 2015 ozone NAAQS. The section 110 and part D requirements which are linked with a particular area's designation and classification are the relevant measures to evaluate in reviewing a redesignation request. This approach is consistent with EPA's existing policy on applicability (i.e., for redesignations) of conformity and oxygenated fuels requirements, as well as with section 184 ozone transport requirements. See Reading, Pennsylvania proposed and final rulemakings, 61 FR 53174-53176 (October 10, 1996) and 62 FR 24826 (May 7, 1997); Cleveland-Akron-Loraine, Ohio final rulemaking, 61 FR 20458 (May 7, 1996); and Tampa, Florida final rulemaking, 60 FR 62748 (December 7, 1995). See also the discussion of this issue in the Cincinnati, Ohio ozone redesignation 65 FR 37890 (June 19, 2000), and the Pittsburgh, Pennsylvania ozone redesignation 66 FR 50399 (October 19, 2001).

We have reviewed Ohio's SIP and have concluded that it meets the general SIP requirements under section 110 of the CAA, to the extent those requirements are applicable for purposes of redesignation. On August 11, 2021 (86 FR 43962), EPA approved elements of the SIP submitted by Ohio to meet the requirements of section 110 for the 2015 ozone standard. The requirements of section 110(a)(2), however, are statewide requirements that are not linked to the 8-hour ozone nonattainment status of the Area.

Therefore, EPA concludes that these infrastructure requirements are not applicable requirements for purposes of review of the state's 8-hour ozone redesignation request.

b. Part D Requirements.

Section 172(c) of the CAA sets forth the basic requirements of air quality plans for states with nonattainment areas that are required to submit them pursuant to section 172(b). Subpart 2 of part D, which includes section 182 of the CAA, establishes specific requirements for ozone nonattainment areas depending on the areas' nonattainment classifications.

The Area was classified as marginal under subpart 2 for the 2015 ozone NAAQS. As such, the Area is subject to the subpart 1 requirements contained in section 172(c) and section 176. Similarly, the Area is subject to the subpart 2 requirements contained in section 182(a) (marginal nonattainment area requirements). A thorough discussion of the requirements contained in section 172(c) and 182 can be found in the General Preamble for Implementation of Title I (57 FR 13498).

i. Subpart 1 Section 172 Requirements.

As provided in subpart 2, for marginal ozone nonattainment areas such as the Area, the specific requirements of section 182(a) apply in lieu of the attainment planning requirements that would otherwise apply under section 172(c), including the attainment demonstration and reasonably available control measures (RACM) under section 172(c)(1), reasonable further progress (RFP) under section 172(c)(2), and contingency measures

under section 172(c)(9). 42 U.S.C. 7511a(a).

Section 172(c)(3) requires submission and approval of a comprehensive, accurate and current inventory of actual emissions. This requirement is superseded by the inventory requirement in section 182(a)(1) discussed below.

Section 172(c)(4) requires the identification and quantification of allowable emissions for major new and modified stationary sources in an area, and section 172(c)(5) requires source permits for the construction and operation of new and modified major stationary sources anywhere in the nonattainment area. EPA approved Ohio's NSR program on January 10, 2003 (68 FR 1366) and February 25, 2010 (75 FR 8496). Nonetheless, EPA has determined that, since PSD requirements will apply after redesignation, areas being redesignated need not comply with the requirement that a NSR program be approved prior to redesignation, provided that the area demonstrates maintenance of the NAAQS without part D NSR. A more detailed rationale for this view is described in a memorandum from Mary Nichols, Assistant Administrator for Air and Radiation, dated October 14, 1994, entitled, "Part D New Source Review Requirements for Areas Requesting Redesignation to Attainment." Ohio has demonstrated that the Area will be able to maintain the standard without part D NSR in effect; therefore, EPA concludes that the state need not have a fully approved part D NSR program prior to approval of the redesignation request. See rulemakings for Detroit, Michigan (60 FR 12467-12468, March 7, 1995); Cleveland-Akron-

Lorain, Ohio (61 FR 20458, 20469-20470, May 7, 1996); Louisville, Kentucky (66 FR 53665, October 23, 2001); and Grand Rapids, Michigan (61 FR 31834-31837, June 21, 1996). Ohio's PSD program will become effective in the Area upon redesignation to attainment. EPA approved Ohio's PSD program on January 22, 2003 (68 FR 2909) and February 25, 2010 (75 FR 8496).

Section 172(c)(6) requires the SIP to contain control measures necessary to provide for attainment of the NAAQS. Because attainment has been reached, no additional measures are needed to provide for attainment.

Section 172(c)(7) requires the SIP to meet the applicable provisions of section 110(a)(2). As noted above, we believe the Ohio SIP meets the requirements of section 110(a)(2) for purposes of redesignation.

ii. Section 176 Conformity Requirements.

Section 176(c) of the CAA requires states to establish criteria and procedures to ensure that Federally supported or funded projects conform to the air quality planning goals in the applicable SIP. The requirement to determine conformity applies to transportation plans, programs and projects that are developed, funded or approved under title 23 of the United States Code (U.S.C.) and the Federal Transit Act (transportation conformity) as well as to all other Federally supported or funded projects (general conformity). State transportation conformity SIP revisions must be consistent with Federal conformity regulations relating to consultation, enforcement and

enforceability that EPA promulgated pursuant to its authority under the CAA.

EPA interprets the conformity SIP requirements<sup>4</sup> as not applying for purposes of evaluating a redesignation request under section 107(d) because state conformity rules are still required after redesignation and Federal conformity rules apply where state conformity rules have not been approved. *See Wall v. EPA*, 265 F.3d 426 (6th Cir. 2001) (upholding this interpretation); *see also* 60 FR 62748 (December 7, 1995) (redesignation of Tampa, Florida). Nonetheless, Ohio has an approved conformity SIP for the Area. *See* 80 FR 11133 (March 2, 2015).

iii. Section 182(a) Requirements.

Section 182(a)(1) requires states to submit a comprehensive, accurate, and current inventory of actual emissions from sources of VOC and NO<sub>x</sub> emitted within the boundaries of the ozone nonattainment area. OEPA submitted a 2014 base year emissions inventory for the Area on July 24, 2020. EPA approved this emissions inventory as a revision to the Ohio SIP on March 3, 2021 (86 FR 12270).

Under section 182(a)(2)(A), states with ozone nonattainment areas that were designated prior to the enactment of the 1990 CAA amendments were required to submit, within six months of

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<sup>4</sup> CAA section 176(c)(4)(E) requires states to submit revisions to their SIPs to reflect certain Federal criteria and procedures for determining transportation conformity. Transportation conformity SIPs are different from SIPs requiring the development of Motor Vehicle Emission Budgets (MVEBs), such as control strategy SIPs and maintenance plans.

classification, all rules and corrections to existing VOC reasonably available control technology (RACT) rules that were required under section 172(b)(3) prior to the 1990 CAA amendments. The Area is not subject to the section 182(a)(2) RACT "fix up" requirement for the 2015 ozone NAAQS because it was designated as nonattainment for this standard after the enactment of the 1990 CAA amendments and because Ohio complied with this requirement for the Area under the prior 1-hour ozone NAAQS. See 59 FR 23796 (May 9, 1994) and 60 FR 15235 (March 23, 1995).

Section 182(a)(2)(B) requires each state with a marginal ozone nonattainment area that implemented or was required to implement a vehicle inspection and maintenance (I/M) program prior to the 1990 CAA amendments to submit a SIP revision for an I/M program no less stringent than that required prior to the 1990 CAA amendments or already in the SIP at the time of the CAA amendments, whichever is more stringent. For the purposes of the 2015 ozone standard and the consideration of Ohio's redesignation request for this standard, the Area is not subject to the section 182(a)(2)(B) requirement because the Area was designated as nonattainment for the 2015 ozone standard after the enactment of the 1990 CAA amendments.

Regarding the source permitting and offset requirements of section 182(a)(2)(C) and section 182(a)(4), Ohio currently has a fully approved part D NSR program in place. EPA approved Ohio's PSD program on January 22, 2003 (68 FR 2909) and February 25,

2010 (75 FR 8496). As discussed above, Ohio has demonstrated that the Area will be able to maintain the standard without part D NSR in effect; therefore, EPA concludes that the state need not have a fully approved part D NSR program prior to approval of the redesignation request. The state's PSD program will become effective in the Area upon redesignation to attainment.

Section 182(a)(3) requires states to submit periodic emission inventories and a revision to the SIP to require the owners or operators of stationary sources to annually submit emission statements documenting actual VOC and NO<sub>x</sub> emissions. As discussed below in section IV.D.4. of this proposed rule, Ohio will continue to update its emissions inventory at least once every three years. With regard to stationary source emission statements, EPA approved Ohio's emission statement rule on September 27, 2007 (72 FR 54844). On July 24, 2020, Ohio certified that this approved SIP regulation remains in place and remains enforceable for the 2015 ozone standard. EPA approved Ohio's certification on March 3, 2021 (81 FR 12270).

The Ohio portion of the Area has satisfied all applicable requirements for purposes of redesignation under section 110 and part D of title I of the CAA.

2. The Ohio portion of the Area has a fully approved SIP for purposes of redesignation under section 110(k) of the CAA.

Ohio has adopted and submitted and EPA has approved at various times, provisions addressing the various SIP elements applicable for the ozone NAAQS. As discussed above, EPA has

fully approved the Ohio SIP for the Area under section 110(k) for all requirements applicable for purposes of redesignation under the 2015 ozone NAAQS. EPA may rely on prior SIP approvals in approving a redesignation request (see the Calcagni memorandum at page 3; *Southwestern Pennsylvania Growth Alliance v. Browner*, 144 F.3d 984, 989-990 (6th Cir. 1998); *Wall v. EPA*, 265 F.3d 426), plus any additional measures it may approve in conjunction with a redesignation action (see 68 FR 25426 (May 12, 2003) and citations therein).

*C. Are the air quality improvements in the Area due to permanent and enforceable emission reductions?*

To redesignate an area from nonattainment to attainment, section 107(d)(3)(E)(iii) of the CAA requires EPA to determine that the air quality improvement in the area is due to permanent and enforceable reductions in emissions resulting from the implementation of the SIP and applicable Federal air pollution control regulations and other permanent and other permanent and enforceable emission reductions. EPA has determined that Ohio has demonstrated that that the observed ozone air quality improvement in the Area is due to permanent and enforceable reductions in VOC and NO<sub>x</sub> emissions resulting from state measures adopted into the SIP and Federal measures.

In making this demonstration, the state has calculated the change in emissions between 2014 and 2019. The reduction in emissions and the corresponding improvement in air quality over this time period can be attributed to a number of regulatory

control measures that the Area and upwind areas have implemented in recent years. In addition, OEPA provided an analysis to demonstrate the improvement in air quality was not due to unusually favorable meteorology. Based on the information summarized below, Ohio has adequately demonstrated that the improvement in air quality is due to permanent and enforceable emissions reductions.

1. Permanent and enforceable emission controls implemented.

a. Regional NO<sub>x</sub> Controls.

*Clean Air Interstate Rule (CAIR)/Cross State Air Pollution Rule (CSAPR)*. CAIR created regional cap-and-trade programs to reduce sulfur dioxide (SO<sub>2</sub>) and NO<sub>x</sub> emissions in 27 eastern states, including Ohio, that contributed to downwind nonattainment and maintenance of the 1997 8-hour ozone NAAQS and the 1997 fine particulate matter (PM<sub>2.5</sub>) NAAQS. See 70 FR 25162 (May 12, 2005). EPA approved Ohio's CAIR regulations into the Ohio SIP on February 1, 2008 (73 FR 6034), and September 25, 2009 (74 FR 48857). In 2008, the United States Court of Appeals for the District of Columbia Circuit (D.C. Circuit) initially vacated CAIR, *North Carolina v. EPA*, 531 F.3d 896 (D.C. Cir. 2008), but ultimately remanded the rule to EPA without vacatur to preserve the environmental benefits provided by CAIR, *North Carolina v. EPA*, 550 F.3d 1176, 1178 (D.C. Cir. 2008). On August 8, 2011 (76 FR 48208), acting on the D.C. Circuit's remand, EPA promulgated CSAPR to replace CAIR and thus to address the interstate transport of emissions contributing to

nonattainment and interfering with maintenance of the two air quality standards covered by CAIR as well as the 2006 PM<sub>2.5</sub> NAAQS. CSAPR requires substantial reductions of SO<sub>2</sub> and NO<sub>x</sub> emissions from electric generating units (EGUs) in 28 states in the Eastern United States.

The D.C. Circuit's initial vacatur of CSAPR<sup>5</sup> was reversed by the United States Supreme Court on April 29, 2014, and the case was remanded to the D.C. Circuit to resolve remaining issues in accordance with the high court's ruling. *EPA v. EME Homer City Generation, L.P.*, 134 S. Ct. 1584 (2014). On remand, the D.C. Circuit affirmed CSAPR in most respects, but invalidated without vacating some of the CSAPR budgets as to a number of states. *EME Homer City Generation, L.P. v. EPA*, 795 F.3d 118 (D.C. Cir. 2015). The remanded budgets include the Phase 2 NO<sub>x</sub> ozone season emissions budgets for Ohio. On September 7, 2016, in response to the remand, EPA finalized an update to CSAPR requiring further reductions in NO<sub>x</sub> emissions from EGUs beginning in May 2017. This final rule was projected to result in a 20% reduction in ozone season NO<sub>x</sub> emissions from EGUs in the eastern United States, a reduction of 800,000 tons in 2017 compared to 2015 levels.

The improvement in ozone air quality in the Area from 2014 (a year when the design value for the area was above the NAAQS) to 2019 is partially due to CSAPR emissions reductions.

b. Federal Emission Control Measures.

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<sup>5</sup> *EME Homer City Generation, L.P. v. EPA*, 696 F.3d 7, 38 (D.C. Cir. 2012).

A large portion of reductions in emissions in the Ohio portion of the Area from 2014–2019 were due to permanent and enforceable reductions in mobile source VOC and NO<sub>x</sub> emissions.

From 2014 to 2019, onroad and nonroad mobile source emission reductions accounted for 63 percent of the total NO<sub>x</sub> reductions and 69 percent of the total VOC reductions in the Ohio portion of the Area. As laid out in the State's maintenance demonstration, NO<sub>x</sub> and VOC emissions in the Ohio portion of the area are projected to continue their downward trend throughout the maintenance period, driven primarily by point source emission reductions from source retirements for NO<sub>x</sub> and onroad and nonroad mobile source reductions for VOC. From 2019 to 2035, Ohio projected that 67 percent of the NO<sub>x</sub> emission reductions would be due to point source emission reductions and 95 percent of the VOC reductions in the Ohio portion of the area would be due to mobile source measures based on EPA-approved mobile source modeling.

Reductions in VOC and NO<sub>x</sub> emissions have occurred statewide and in upwind areas as a result of Federal emission control measures, with additional emission reductions expected to occur in the future. Federal emission control measures include the following.

*Tier 2 Emission Standards for Vehicles and Gasoline Sulfur Standards.* On February 10, 2000 (65 FR 6698), EPA promulgated Tier 2 motor vehicle emission standards and gasoline sulfur control requirements. These emission control requirements

result in lower VOC and NO<sub>x</sub> emissions from new cars and light duty trucks, including sport utility vehicles. With respect to fuels, this rule required refiners and importers of gasoline to meet lower standards for sulfur in gasoline, which were phased in between 2004 and 2006. By 2006, refiners were required to meet a 30 ppm average sulfur level, with a maximum cap of 80 ppm. This reduction in fuel sulfur content ensures the effectiveness of low emission-control technologies. The Tier 2 tailpipe standards established in this rule were phased in for new vehicles between 2004 and 2009. EPA estimates that, when fully implemented, this rule will cut NO<sub>x</sub> and VOC emissions from light-duty vehicles and light-duty trucks by approximately 76 and 28 percent, respectively. NO<sub>x</sub> and VOC reductions from medium-duty passenger vehicles included as part of the Tier 2 vehicle program are estimated to be approximately 37,000 and 9,500 tons per year, respectively, when fully implemented. In addition, EPA estimates that beginning in 2007, a reduction of 30,000 tons per year of NO<sub>x</sub> will result from the benefits of sulfur control on heavy-duty gasoline vehicles. Some of these emission reductions occurred by the attainment years and additional emission reductions will occur throughout the maintenance period, as older vehicles are replaced with newer, compliant model years.

*Tier 3 Emission Standards for Vehicles and Gasoline Sulfur Standards.* On April 28, 2014 (79 FR 23414), EPA promulgated Tier 3 motor vehicle emission and fuel standards to reduce both

tailpipe and evaporative emissions and to further reduce the sulfur content in fuels. The rule will be phased in between 2017 and 2025. Tier 3 sets new tailpipe standards for the sum of VOC and NO<sub>x</sub> and for particulate matter. The VOC and NO<sub>x</sub> tailpipe standards for light-duty vehicles represent approximately an 80% reduction from today's fleet average and a 70% reduction in per-vehicle particulate matter (PM) standards. Heavy-duty tailpipe standards represent about a 60% reduction in both fleet average VOC and NO<sub>x</sub> and per-vehicle PM standards. The evaporative emissions requirements in the rule will result in approximately a 50 percent reduction from current standards and apply to all light-duty and onroad gasoline-powered heavy-duty vehicles. Finally, the rule lowers the sulfur content of gasoline to an annual average of 10 ppm by January 2017. As projected by these estimates and demonstrated in the onroad emission modeling for the Area, some of these emission reductions occurred by the attainment years and additional emission reductions will occur throughout the maintenance period, as older vehicles are replaced with newer, compliant model years.

*Heavy-Duty Diesel Engine Rules.* In July 2000, EPA issued a rule for on-highway heavy-duty diesel engines that includes standards limiting the sulfur content of diesel fuel. Emissions standards for NO<sub>x</sub>, VOC and PM were phased in between model years 2007 and 2010. In addition, the rule reduced the highway diesel fuel sulfur content to 15 parts per million by 2007, leading to

additional reductions in combustion NO<sub>x</sub> and VOC emissions. EPA has estimated future year emission reductions due to implementation of this rule. Nationally, EPA estimated that 2015 NO<sub>x</sub> and VOC emissions would decrease by 1,260,000 tons and 54,000 tons, respectively. Nationally, EPA estimated that 2030 NO<sub>x</sub> and VOC emissions will decrease by 2,570,000 tons and 115,000 tons, respectively. As projected by these estimates and demonstrated in the on-road emission modeling for the Area, some of these emission reductions occurred by the attainment years and additional emission reductions will occur throughout the maintenance period, as older vehicles are replaced with newer, compliant model years.

*Nonroad Diesel Rule.* On June 29, 2004 (69 FR 38958), EPA issued a rule adopting emissions standards for nonroad diesel engines and sulfur reductions in nonroad diesel fuel. This rule applies to diesel engines used primarily in construction, agricultural, and industrial applications. Emission standards are phased in for 2008 through 2015 model years based on engine size. The SO<sub>2</sub> limits for nonroad diesel fuels were phased in from 2007 through 2012. EPA estimates that when fully implemented, compliance with this rule will cut NO<sub>x</sub> emissions from these nonroad diesel engines by approximately 90 percent. Some of these emission reductions occurred by the attainment years and additional emission reductions will occur throughout the maintenance period.

*Nonroad Spark-Ignition Engines and Recreational Engine*

*Standards.* On November 8, 2002 (67 FR 68242), EPA adopted emission standards for large spark-ignition engines such as those used in forklifts and airport ground-service equipment; recreational vehicles such as off-highway motorcycles, all-terrain vehicles, and snowmobiles; and recreational marine diesel engines. These emission standards are phased in from model year 2004 through 2012. When fully implemented, EPA estimates an overall 72 percent reduction in VOC emissions from these engines and an 80 percent reduction in NO<sub>x</sub> emissions. Some of these emission reductions occurred by the attainment years and additional emission reductions will occur throughout the maintenance period.

*Category 3 Marine Diesel Engine Standards.* On April 30, 2010 (75 FR 22896) EPA issued emission standards for marine compression-ignition engines at or above 30 liters per cylinder. Tier 2 emission standards apply beginning in 2011, and are expected to result in a 15 to 25 percent reduction in NO<sub>x</sub> emissions from these engines. Final Tier 3 emission standards apply beginning in 2016 and are expected to result in approximately an 80 percent reduction in NO<sub>x</sub> from these engines. Some of these emission reductions occurred by the attainment years and additional emission reductions will occur throughout the maintenance period.

c. Control Measures Specific to the Area.

Changes at several EGUs have resulted in reductions in NO<sub>x</sub> emissions. The Walter C. Beckjord facility in Clermont County,

Ohio permanently shut down in October of 2014. NO<sub>x</sub> emissions from EGUs in Clermont County dropped from 44.88 Tons per summer day (TPSD) in 2014 to 15.87 TPSD in 2019, partly attributable to closure of the Walter C. Beckjord facility. Further, the DTE St. Bernard facility converted to natural gas from coal-fired boilers in November of 2015. NO<sub>x</sub> emissions from EGUs in Hamilton County dropped from 4.10 TPSD in 2014 to 2.40 TPSD in 2019, partially attributable to the DTE St. Bernard facility fuel conversion.

## 2. Emission reductions.

Ohio is using a 2014 emissions inventory as the nonattainment year. This is appropriate because it was one of the years used to designate the area as nonattainment. Ohio is using a 2019 inventory as the attainment year inventory for the purposes of comparison, which is appropriate because it is one of the years in the 2019-2021 period used to demonstrate attainment. Area (including airports and railyards), nonroad mobile, and point source emissions (EGUs and non-EGUs) were collected from data available on EPA's Air Emissions Modeling website<sup>6</sup>. Using Emissions Modeling platforms 2014v7.1 and 2016v2, OEPA collected data for the 2014 National Emissions Inventory (NEI) year and the 2016 NEI for the 2023, 2026 and 2032 projected emissions, versions 2014fd, 2016fj, 2023 fj, 2026fj and 2032fd respectively. OEPA determined the 2016v2 inventory was the appropriate inventory for the projected

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<sup>6</sup> <https://www.epa.gov/air-emissions-modeling/2014-2016-version-7-air-emissions-modeling-platforms>

emission data as it represents the best available emission data, updated with EGU impacts of the CSAPR Update and improvements in methodologies related to solvents. TPSD emissions were then derived by dividing July emissions by the number of days in July. 2014 emissions were derived from the 2014v7.1 platform without modification. 2019 emissions were derived by interpolating between the 2016 and projected 2026 emissions from the 2016v2 (versions 2016fd and 2023fd) platform.

OEPA compiled 2014 and 2019 actual point source emissions from state inventory databases. TPSD emissions were then derived by applying a conversion factor to the annual emissions. The conversion factor was derived from the emissions modeling platform 2016v2 as the ratio of the average July day to annual emissions for the non-EGU sector.

Onroad mobile source emissions were developed in conjunction with the Ohio-Kentucky-Indiana Regional Council of Governments (OKI) and were calculated from emission factors produced by EPA's 2020 Motor Vehicle Emission Simulator (MOVES3) model and data extracted from the region's travel-demand model.

Using the inventories described above, Ohio's submittal documents changes in VOC and NO<sub>x</sub> emissions from 2014 to 2019 for the Area. Emissions data are shown in Tables 2 through 7.

Table 2. Area NO<sub>x</sub> emissions for nonattainment year 2014 (TPSD).

County	Point	Nonroad	Area	Onroad	Total
Ohio					
Butler	11.06	4.21	2.46	12.40	30.13
Clermont	44.91	2.33	1.14	6.90	55.28
Hamilton	23.13	8.19	7.70	32.60	71.62
Warren	0.94	3.21	1.03	11.00	16.18
Kentucky					
Boone	12.96	1.61	3.65	7.10	25.32
Campbell	0.28	0.60	1.65	2.50	5.03
Kenton	0.28	1.19	1.48	5.90	8.85
Ohio Totals	80.04	17.94	12.33	62.90	173.21
Area Totals	93.56	21.34	19.11	78.40	212.41

Table 3. Area VOC emissions for nonattainment year 2014 (TPSD).

County	Point	Nonroad	Area	Onroad	Total
Ohio					
Butler	2.93	3.26	13.38	6.10	25.67
Clermont	0.67	2.51	6.26	3.50	12.94
Hamilton	2.76	8.39	31.81	13.70	56.66
Warren	0.51	2.89	8.91	3.70	16.01
Kentucky					
Boone	1.95	2.70	9.28	1.60	15.53
Campbell	0.49	0.68	2.48	0.90	4.55
Kenton	0.46	0.98	4.03	1.60	7.07
Ohio Totals	6.87	17.05	60.36	27.00	111.28
Area Totals	9.77	21.41	76.15	31.10	138.43

Table 4. Area NO<sub>x</sub> emissions for attainment year 2019 (TPSD).

County	Point	Nonroad	Area	Onroad	Total
Ohio					
Butler	8.63	2.01	2.26	7.00	19.90
Clermont	15.87	1.43	1.09	3.80	22.19
Hamilton	36.16	5.90	5.34	18.00	65.40
Warren	2.08	2.01	1.04	6.20	11.33
Kentucky					
Boone	5.99	0.74	2.54	4.70	13.97
Campbell	0.29	0.38	0.92	2.20	3.79
Kenton	0.28	0.57	1.53	5.30	7.68
Ohio Totals	62.74	11.35	9.73	35.00	118.82
Area Totals	69.30	13.04	14.72	47.20	144.26

Table 5. Area VOC emissions for attainment year 2019 (TPSD).

County	Point	Nonroad	Area	Onroad	Total
Ohio					
Butler	2.41	2.52	12.28	3.90	21.11
Clermont	0.46	2.17	6.84	2.20	11.67
Hamilton	2.21	6.15	27.26	8.40	44.02
Warren	0.74	2.49	8.88	2.40	14.51
Kentucky					
Boone	2.75	1.49	7.29	1.30	12.83
Campbell	0.40	0.52	2.23	0.80	3.95
Kenton	0.43	0.74	4.11	1.50	6.78
Ohio Totals	5.82	13.33	55.26	16.90	91.31
Area Totals	9.40	16.08	68.89	20.50	114.87

Table 6. Change in NO<sub>x</sub> and VOC emissions between 2014 and 2019 for the Ohio portion of the Area (TPSD).

	NO <sub>x</sub>			VOC		
	2014	2019	Net Change (2014-2019)	2014	2019	Net Change (2014-2019)
Point	80.04	62.74	-17.30	6.87	5.82	-1.05
Nonroad	17.94	11.35	-6.59	17.05	13.33	-3.72
Area	12.33	9.73	-2.60	60.36	55.26	-5.10
Onroad	62.90	35.00	-27.90	27.00	16.90	-10.10
Total	173.21	118.82	-54.39	111.28	91.31	-19.97

Table 7. Change in NO<sub>x</sub> and VOC emissions between 2014 and 2019 for the entire Area (TPSD).

	NO <sub>x</sub>			VOC		
	2014	2019	Net Change (2014-2019)	2014	2019	Net Change (2014-2019)
Point	93.56	69.30	-24.26	9.77	9.40	-0.37
Nonroad	21.34	13.04	-8.30	21.41	16.08	-5.33
Area	19.11	14.72	-4.39	76.15	68.89	-7.26
Onroad	78.40	47.20	-31.20	31.10	20.50	-10.60
Total	212.41	144.26	-68.15	138.43	114.87	-23.56

Table 7 shows that the Area reduced NO<sub>x</sub> and VOC emissions by 68.15 TPSD and 23.56 TPSD, respectively, between 2014 and 2019.

As shown in Table 6, the Ohio portion of the Area alone reduced NO<sub>x</sub> and VOC emissions by 54.39 TPSD and 19.97 TPSD, respectively, between 2014 and 2019.

### 3. Meteorology.

To further support OEPA's demonstration that the improvement in air quality between the year violations occurred and the year attainment was achieved, is due to permanent and enforceable emission reductions and not on favorable meteorology, an analysis was performed by the Lake Michigan Air Directors Consortium (LADCO). A classification and regression tree (CART) analysis was conducted with 2005 through 2020 data from Area ozone sites that had average ozone concentrations of greater than 50 parts per billion (ppb). The goal of the analysis was to determine the meteorological and air quality conditions associated with ozone episodes, and construct trends for the days identified as sharing similar meteorological conditions.

Regression trees were developed for the Area ozone data to classify each summer day by its ozone concentration and associated meteorological conditions. By grouping days with similar meteorology, the influence of meteorological variability on the underlying trend in ozone concentrations is partially removed and the remaining trend is presumed to be due to trends in precursor emissions or other non-meteorological influences. The CART analysis showed the resulting trends in ozone concentrations declining over the period examined, supporting

the conclusion that the improvement in air quality was not due to unusually favorable meteorology.

*D. Does Ohio have a fully approvable ozone maintenance plan for the Area?*

As one of the criteria for redesignation to attainment section 107(d)(3)(E)(iv) of the CAA requires EPA to determine that the area has a fully approved maintenance plan pursuant to section 175A of the CAA. Section 175A of the CAA sets forth the elements of a maintenance plan for areas seeking redesignation from nonattainment to attainment. Under section 175A, the maintenance plan must demonstrate continued attainment of the NAAQS for at least 10 years after the Administrator approves a redesignation to attainment. Eight years after the redesignation, the state must submit a revised maintenance plan which demonstrates that attainment of the NAAQS will continue for an additional 10 years beyond the initial 10 year maintenance period. To address the possibility of future NAAQS violations, the maintenance plan must contain contingency measures, as EPA deems necessary, to assure prompt correction of the future NAAQS violation.

The Calcagni Memorandum provides further guidance on the content of a maintenance plan, explaining that a maintenance plan should address five elements: (1) an attainment emission inventory; (2) a maintenance demonstration; (3) a commitment for continued air quality monitoring; (4) a process for verification of continued attainment; and (5) a contingency plan. In

conjunction with its request to redesignate the Ohio portion of the Area to attainment for the 2015 ozone standard, OEPA submitted a SIP revision to provide for maintenance of the 2015 ozone standard through 2035, more than 10 years after the expected effective date of the redesignation to attainment. As is discussed more fully below, EPA proposes to find that Ohio's ozone maintenance plan includes the necessary components and is proposing to approve the maintenance plan as a revision of the Ohio SIP.

1. Attainment inventory.

EPA is proposing to determine that the Area has attained the 2015 8-hour ozone NAAQS based on monitoring data for the period of 2019-2021. OEPA selected 2019 as the attainment emissions inventory year to establish attainment emission levels for VOC and NO<sub>x</sub>. The attainment emissions inventory identifies the levels of emissions in the Area that are sufficient to attain the 2015 ozone NAAQS. The derivation of the attainment year emissions was discussed above in section IV.C.2. of this proposed rule. The attainment level emissions, by source category, are summarized in Tables 4 and 5 above.

2. Has the state documented maintenance of the ozone standard in the Area?

Ohio has demonstrated maintenance of the 2015 ozone standard through 2035 by assuring that current and future emissions of VOC and NO<sub>x</sub> for the Area remain at or below attainment year emission levels. A maintenance demonstration

need not be based on modeling. See *Wall v. EPA*, 265 F.3d 426 (6th Cir. 2001), *Sierra Club v. EPA*, 375 F. 3d 537 (7th Cir. 2004). See also 66 FR 53094, 53099-53100 (October 19, 2001), 68 FR 25413, 25430-25432 (May 12, 2003).

Ohio is using emissions inventories for the years 2026 and 2035 to demonstrate maintenance. 2035 is more than 10 years after the expected effective date of the redesignation to attainment and 2026 was selected to demonstrate that emissions are not expected to spike in the interim between the attainment year and the final maintenance year. The emissions inventories were developed as described below.

To develop the 2026 and 2035 inventories, the state collected data from the Ozone NAAQS Emissions Modeling platform (2016v2) inventories for the base year 2016 and the 2023, 2026 and 2032 projected inventories. 2026 emissions for area, nonroad mobile, AIR, and point source sectors were derived from 2026 EPA-projected emissions from the 2016v2 platform (version 2026fd) without modification. 2035 emissions for area, nonroad mobile, AIR, and point source sectors were derived by extrapolating from the 2032 EPA-projected emissions from the 2016v2 platform (version 2032fd) and using the TREND function in Excel. If the trend function resulted in a negative value, the emissions were assumed to be the same as in 2032. Summer day inventories were derived for these sectors using the methodology described in section IV.C.2. above. Finally, onroad mobile source emissions were developed in conjunction with OKI using

the same methodology described in section IV.C.2. above for the 2016 inventory. Emissions data are shown in Tables 8 through 13 below.

Table 8. Area NO<sub>x</sub> emissions for interim maintenance year 2026 (TPSD).

County	Point	Nonroad	Area	Onroad	Total
Ohio					
Butler	9.07	1.46	2.02	4.40	16.95
Clermont	10.43	1.07	0.93	2.30	14.73
Hamilton	13.72	4.12	5.03	11.30	34.17
Warren	2.23	1.44	1.00	4.00	8.67
Kentucky					
Boone	2.13	0.58	3.22	2.60	8.53
Campbell	0.28	0.29	0.70	0.90	2.17
Kenton	0.29	0.41	1.22	2.40	4.32
Ohio Totals	35.45	8.09	8.98	22.00	74.52
Area Totals	38.15	9.37	14.12	27.90	89.54

Table 9. Area VOC emissions for interim maintenance year 2026 (TPSD).

County	Point	Nonroad	Area	Onroad	Total
Ohio					
Butler	1.75	2.24	12.47	2.90	19.36
Clermont	0.19	1.68	7.41	1.60	10.88
Hamilton	1.46	5.53	26.21	6.00	39.20
Warren	0.82	1.86	10.14	1.80	14.62
Kentucky					
Boone	1.68	1.28	8.21	1.00	12.17
Campbell	0.42	0.40	2.22	0.50	3.54
Kenton	0.64	0.71	4.21	1.00	6.56
Ohio Totals	4.22	11.31	56.23	12.30	84.06
Area Totals	6.96	13.70	70.87	14.80	106.33

Table 10. Area NO<sub>x</sub> emissions for maintenance year 2035 (TPSD).

County	Point	Nonroad	Area	Onroad	Total
Ohio					
Butler	8.31	1.26	1.90	3.30	15.19
Clermont	0.01	0.90	0.81	1.60	3.32
Hamilton	2.66	3.60	4.69	8.60	19.66
Warren	2.05	1.20	0.95	3.00	7.20

Kentucky					
Boone	2.35	0.54	3.85	2.00	8.74
Campbell	0.28	0.26	0.58	0.60	1.72
Kenton	0.30	0.37	1.06	1.60	3.33
Ohio Totals	13.03	6.96	8.35	16.50	45.37
Area Totals	15.96	8.13	13.84	20.70	59.16

Table 11. Area VOC emissions for maintenance year 2035 (TPSD).

County	Point	Nonroad	Area	Onroad	Total
Ohio					
Butler	1.67	2.18	12.65	2.10	18.65
Clermont	0.06	1.54	7.87	1.20	10.67
Hamilton	1.28	5.46	25.54	4.50	36.79
Warren	0.82	1.67	11.18	1.40	15.07
Kentucky					
Boone	1.68	1.25	8.99	0.80	12.72
Campbell	0.42	0.37	2.22	0.30	3.31
Kenton	0.64	0.72	4.28	0.70	6.34
Ohio Totals	3.83	10.85	57.24	9.20	81.18
Area Totals	6.57	13.19	72.73	11.00	103.55

Table 12. Change in NO<sub>x</sub> and VOC emissions between 2019 and 2035 for the Ohio portion of the Area (TPSD).

	NO <sub>x</sub>				VOC			
	2019	2026	2035	Net Change (2019-2035)	2019	2026	2035	Net Change (2019-2035)
Point	62.74	35.45	13.03	-49.71	5.82	4.22	3.83	-1.99
Nonroad	11.35	8.09	6.96	-4.39	13.33	11.31	10.85	-2.48
Area	9.73	8.98	8.35	-1.38	55.26	56.23	57.24	1.98
Onroad	35.00	22.00	16.50	-18.50	16.90	12.30	9.20	-7.70
Total	118.82	74.52	44.84	-73.98	91.31	84.06	81.12	-10.19

Table 13. Change in NO<sub>x</sub> and VOC emissions between 2019 and 2035 for the entire Area (TPSD).

	NO <sub>x</sub>				VOC			
	2019	2026	2035	Net Change (2019-2035)	2019	2026	2035	Net Change (2019-2035)
Point	69.30	38.15	15.96	-53.34	9.40	6.96	6.57	-2.83
Nonroad	13.04	9.37	8.13	-4.91	16.08	13.70	13.19	-2.89
Area	14.72	14.12	13.84	-0.88	68.89	70.87	72.73	3.84
Onroad	47.20	27.90	20.70	-26.50	20.50	14.80	11.00	-9.50
Total	144.26	89.54	59.16	-55.10	114.87	106.33	103.55	-11.32

In summary, the maintenance demonstration for the Area shows maintenance of the 2015 ozone standard by providing emissions information to support the demonstration that future emissions of NO<sub>x</sub> and VOC will remain at or below 2019 emission levels when taking into account both future source growth and implementation of future controls. Table 13 shows NO<sub>x</sub> and VOC emissions in the Area are projected to decrease by 55.10 TPSD and 11.32 TPSD, respectively, between 2019 and 2035. As shown in Table 12, NO<sub>x</sub> and VOC emissions in the Ohio portion of the Area alone are projected to decrease by 73.98 TPSD and 10.19 TPSD, respectively, between 2019 and 2035.

### 3. Continued air quality monitoring.

OEPA has committed to continue to operate the ozone monitors listed in Table 1 above. OEPA has committed to consult with EPA prior to making changes to the existing monitoring network should changes become necessary in the future. Ohio remains obligated to meet monitoring requirements and continue to quality assure monitoring data in accordance with 40 CFR part

58, and to enter all data into the Air Quality System (AQS) in accordance with Federal guidelines.

#### 4. Verification of continued attainment.

The State of Ohio has the legal authority to enforce and implement the requirements of the maintenance plan for the Ohio portion of the Area. This includes the authority to adopt, implement, and enforce any subsequent emission control measures determined to be necessary to correct future ozone attainment problems.

Verification of continued attainment is accomplished through operation of the ambient ozone monitoring network and the periodic update of the area's emissions inventory. OEPA will continue to operate the current ozone monitors located in the Ohio portion of the Area. There are no plans to discontinue operation, relocate, or otherwise change the existing ozone monitoring network other than through revisions in the network approved by the EPA.

In addition, to track future levels of emissions, OEPA will continue to develop and submit to EPA updated emission inventories for all source categories at least once every three years, consistent with the requirements of 40 CFR part 51, subpart A, and in 40 CFR 51.122. The Consolidated Emissions Reporting Rule (CERR) was promulgated by EPA on June 10, 2002 (67 FR 39602). The CERR was replaced by the Annual Emissions Reporting Requirements (AERR) on December 17, 2008 (73 FR 76539). The most recent triennial inventory for Ohio was

compiled for 2017. Point source facilities covered by Ohio's emission statement rule, Ohio Administrative Code Chapter 3745-24, will continue to submit VOC and NO<sub>x</sub> emissions on an annual basis.

5. What is the contingency plan for the Area?

Section 175A of the CAA requires that the state must adopt a maintenance plan, as a SIP revision, that includes such contingency measures as EPA deems necessary to assure that the state will promptly correct a violation of the NAAQS that occurs after redesignation of the area to attainment of the NAAQS. The maintenance plan must identify: the contingency measures to be considered and, if needed for maintenance, adopted and implemented; a schedule and procedure for adoption and implementation; and a time limit for action by the state. The state should also identify specific indicators to be used to determine when the contingency measures need to be considered, adopted, and implemented. The maintenance plan must include a commitment that the state will implement all measures with respect to the control of the pollutant that were contained in the SIP before redesignation of the area to attainment in accordance with section 175A(d) of the CAA.

As required by section 175A of the CAA, Ohio has adopted a contingency plan for the Area to address possible future ozone air quality problems. The contingency plan adopted by Ohio has two levels of response, a warning level response and an action level response.

In Ohio's plan, a warning level response will be triggered when an annual fourth high monitored value of 0.074 ppm or higher is monitored within the maintenance area. A warning level response will consist of OEPA conducting a study to determine whether the ozone value indicates a trend toward higher ozone values or whether emissions appear to be increasing. The study will evaluate whether the trend, if any, is likely to continue and, if so, the control measures necessary to reverse the trend. The study will consider ease and timing of implementation as well as economic and social impacts. Implementation of necessary controls in response to a warning level response trigger will take place within 12 months from the conclusion of the most recent ozone season.

In Ohio's plan, an action level response is triggered when a two-year average fourth high value of 0.071 ppm or greater is monitored within the maintenance area. A violation of the 2015 ozone NAAQS within the maintenance area also triggers an action level response. When an action level response is triggered, OEPA, in conjunction with the metropolitan planning organization or regional council of governments, will determine what additional control measures are needed to assure future attainment of the 2015 ozone NAAQS. Control measures selected will be adopted and implemented within 18 months from the close of the ozone season that prompted the action level. OEPA may also consider if significant new regulations not currently included as part of the maintenance provisions will be

implemented in a timely manner and would thus constitute an adequate contingency measure response.

OEPA included the following list of potential contingency measures in its maintenance plan:

1. Adopt VOC RACT on existing sources covered by EPA Control Technique Guidelines issued after the 1990 CAA.
2. Apply VOC RACT to smaller existing sources.
3. One or more transportation control measures sufficient to achieve at least half a percent reduction in actual area wide VOC emissions. Transportation measures will be selected from the following, based upon the factors listed above after consultation with affected local governments:
  - a. trip reduction programs, including, but not limited to, employer-based transportation management plans, area wide rideshare programs, work schedule changes, and telecommuting;
  - b. traffic flow and transit improvements; and
  - c. other new or innovative transportation measures not yet in widespread use that affected local governments deem appropriate.
4. Alternative fuel and diesel retrofit programs for fleet vehicle operations.
5. Require VOC or NO<sub>x</sub> emission offsets for new and modified major sources.
6. Increase the ratio of emission offsets required for new

sources.

7. Require VOC or NO<sub>x</sub> controls on new minor sources (less than 100 tons).
8. Adopt NO<sub>x</sub> RACT for existing combustion sources.
9. High volume, low pressure coating application requirements for autobody facilities.
10. Requirements for cold cleaner degreaser operations (low vapor pressure solvents).

To qualify as contingency measure, emissions reductions from that measure must not be factored into the emissions projections used in the maintenance plan.

EPA has concluded that the maintenance plan adequately addresses the five basic components of a maintenance plan: attainment inventory, maintenance demonstration, monitoring network, verification of continued attainment, and a contingency plan. In addition, as required by section 175A(b) of the CAA, OEPA has committed to submit to EPA an updated ozone maintenance plan eight years after redesignation of the Ohio portion of the Area to cover an additional ten years beyond the initial 10-year maintenance period. Thus, EPA proposes to find that the maintenance plan SIP revision submitted by OEPA for the Ohio portion of the Area meets the requirements of section 175A of the CAA and EPA proposes to approve it as a revision to the Ohio SIP.

**V. Has the state adopted approvable motor vehicle emission budgets?**

A. *Motor vehicle emission budgets.*

Under section 176(c) of the CAA, new transportation plans, programs, or projects that receive Federal funding or support, such as the construction of new highways, must "conform" to (i.e., be consistent with) the SIP. Conformity to the SIP means that transportation activities will not cause new air quality violations, worsen existing air quality problems, or delay timely attainment of the NAAQS or interim air quality milestones. Regulations at 40 CFR part 93 set forth EPA policy, criteria, and procedures for demonstrating and assuring conformity of transportation activities to a SIP. Transportation conformity is a requirement for nonattainment and maintenance areas. Maintenance areas are areas that were previously nonattainment for a particular NAAQS, but that have been redesignated to attainment with an approved maintenance plan for the NAAQS.

Under the CAA, states are required to submit, at various times, control strategy SIPs for nonattainment areas and maintenance plans for areas seeking redesignations to attainment of the ozone standard and maintenance areas. See the SIP requirements for the 2015 ozone standard in EPA's December 6, 2018 implementation rule (83 FR 62998). These control strategy SIPs (including reasonable further progress plans and attainment plans) and maintenance plans must include MVEBs for criteria pollutants, including ozone, and their precursor pollutants (VOC and NO<sub>x</sub> for ozone) to address pollution from onroad

transportation sources. The MVEBs are the portion of the total allowable emissions that are allocated to highway and transit vehicle use that, together with emissions from other sources in the area, will provide for attainment or maintenance. See 40 CFR 93.101.

Under 40 CFR part 93, a MVEB for an area seeking a redesignation to attainment must be established, at minimum, for the last year of the maintenance plan. A state may adopt MVEBs for other years as well. The MVEB serves as a ceiling on emissions from an area's planned transportation system. The MVEB concept is further explained in the preamble to the November 24, 1993, Transportation Conformity Rule (58 FR 62188). The preamble also describes how to establish the MVEB in the SIP and how to revise the MVEB, if needed, subsequent to initially establishing a MVEB in the SIP.

As discussed earlier, Ohio's maintenance plan includes NO<sub>x</sub> and VOC MVEBs for the Area for 2035 and 2026, the last year of the maintenance period and an interim year. The MVEBS were developed as part of an interagency consultation process which includes Federal, state, and local agencies. The MVEBS were clearly identified and precisely quantified. These MVEBs, when considered together with all other emissions sources, are consistent with maintenance of the 2015 8-hour ozone standard.

Table 14. MVEBs for the Ohio portion of the Area, TPSD.

	Attainment Year 2019 Onroad Emissions	2026 Estimated Onroad Emissions	2026 Mobile Safety Margin Allocation	2026 MVEBs	2035 Estimated Onroad Emissions	2035 Mobile Safety Margin Allocation	2035 MVEBs
VOC	15.58	12.30	1.85	14.15	9.20	1.38	10.58
NO <sub>x</sub>	31.90	22.00	3.30	25.30	16.50	2.48	18.98

As shown in Table 14, the 2026 and 2035 MVEBs exceed the estimated 2026 and 2035 onroad sector emissions. In an effort to accommodate future variations in travel demand models and vehicle miles traveled forecast, OEPA allocated a portion of the safety margin (described further below) to the mobile sector. Ohio has demonstrated that the Area can maintain the 2015 ozone NAAQS with mobile source emissions in the Ohio portion of the area of 14.15 TPSD and 10.58 TPSD of VOC and 25.3 TPSD and 18.98 TPSD of NO<sub>x</sub> in 2026 and 2035, respectively, since despite partial allocation of the safety margin, emissions will remain under attainment year emission levels. EPA is proposing to approve the MVEBs for use to determine transportation conformity in the Ohio portion of the Area, because EPA has determined that the area can maintain attainment of the 2015 ozone NAAQS for the relevant maintenance period with mobile source emissions at the levels of the MVEBs.

*B. What is a safety margin?*

A "safety margin" is the difference between the attainment level of emissions (from all sources) and the projected level of emissions (from all sources) in the maintenance plan. As noted in Table 12, the emissions in the Ohio portion of the Area are

projected to have safety margins of 55.10 TPSD for NO<sub>x</sub> and 11.32 TPSD for VOC in 2035 (the difference between the attainment year, 2019, emissions and the projected 2035 emissions for all sources in the Ohio portion of the Area). Similarly, there is a safety margin of 30.38 TPSD for NO<sub>x</sub> and 2.78 TPSD for VOC in 2026. Even if emissions reached the full level of the safety margin, the counties would still demonstrate maintenance since emission levels would equal those in the attainment year.

As shown in Table 14 above, Ohio is allocating a portion of that safety margin to the mobile source sector. Specifically, in 2026, Ohio is allocating 1.85 TPSD and 3.30 TPSD of the VOC and NO<sub>x</sub> safety margins, respectively. In 2035, Ohio is allocating 1.38 TPSD and 2.48 TPSD of the VOC and NO<sub>x</sub> safety margins, respectively. OEPA is not requesting allocation to the MVEBs of the entire available safety margins reflected in the demonstration of maintenance. In fact, the amount allocated to the MVEBs represents only a small portion of the 2026 and 2035 safety margins. Therefore, even though the state is requesting MVEBs that exceed the projected onroad mobile source emissions for 2026 and 2035 contained in the demonstration of maintenance, the increase in onroad mobile source emissions that can be considered for transportation conformity purposes is well within the safety margins of the ozone maintenance demonstration. Further, once allocated to mobile sources, these safety margins will not be available for use by other sources.

## **VI. Proposed actions.**

EPA is proposing to determine that the Area is attaining the 2015 ozone standard, based on quality-assured and certified monitoring data for 2019-2021 and that the Ohio portion of this area has met the requirements for redesignation under section 107(d) (3) (E) of the CAA. EPA is thus proposing to approve OEPA's request to change the legal designation of the Ohio portion of the Area from nonattainment to attainment for the 2015 ozone standard. EPA is also proposing to approve, as a revision to the Ohio SIP, the state's maintenance plan for the area. The maintenance plan is designed to keep the Area in attainment of the 2015 ozone NAAQS through 2035. Finally, EPA is proposing to approve the newly established 2026 and 2035 MVEBs for the Ohio portion of the Area.

#### **VII. Statutory and executive order reviews.**

Under the CAA, redesignation of an area to attainment and the accompanying approval of a maintenance plan under section 107(d) (3) (E) are actions that affect the status of a geographical area and do not impose any additional regulatory requirements on sources beyond those imposed by state law. A redesignation to attainment does not in and of itself create any new requirements, but rather results in the applicability of requirements contained in the CAA for areas that have been redesignated to attainment. Moreover, the Administrator is required to approve a SIP submission that complies with the provisions of the CAA and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP

submissions, EPA's role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, this action merely approves state law as meeting Federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this action:

- Is not a significant regulatory action subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Public Law 104-4);
- Does not have federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is not subject to requirements of Section 12(d) of the

National Technology Transfer and Advancement Act of 1995  
(15 U.S.C. 272 note) because application of those  
requirements would be inconsistent with the CAA; and

- Does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, the SIP is not approved to apply on any Indian reservation land or in any other area where EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. In those areas of Indian country, this rule does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), because redesignation is an action that affects the status of a geographical area and does not impose any new regulatory requirements on tribes, impact any existing sources of air pollution on tribal lands, nor impair the maintenance of ozone national ambient air quality standards in tribal lands.

**List of Subjects in 40 CFR Part 52**

Environmental protection, Air pollution control,  
Incorporation by reference, Intergovernmental relations, Oxides  
of nitrogen, Ozone, Volatile organic compounds.

Dated: February 4, 2022.

Debra Shore,  
*Regional Administrator, Region 5.*

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